

Available at [www.sciencedirect.com](http://www.sciencedirect.com)

ScienceDirect

journal homepage: [www.elsevier.com/locate/IJMYCO](http://www.elsevier.com/locate/IJMYCO)

## Recent advances on nontuberculous mycobacteria diseases in Asia

**Po-Ren Hsueh**

Divisions of Clinical Microbiology and Infectious Diseases, Departments of Laboratory Medicine and Internal Medicine, National Taiwan University Hospital, National Taiwan University College of Medicine, Taipei, Taiwan

### ARTICLE INFO

#### Article history:

Received 13 November 2014

Accepted 17 November 2014

Available online 24 December 2014

#### Keywords:

Nontuberculous mycobacteria  
Asia

The isolation rate of nontuberculous mycobacteria (NTM) species and the prevalence of NTM-associated diseases are on the rise worldwide; however, the species distribution of NTM isolates and the types of diseases caused by NTM species vary from region to region. Treatment of a NTM disease is complicated, and there is no comprehensive guideline regarding the *in vitro* susceptibility of each antimicrobial agent against NTM. Therefore, appropriate anti-NTM treatment can only be recommended based on individual NTM species and local surveillance studies of anti-NTM resistance. Previous studies on the *in vitro* susceptibility of *Mycobacterium avium* complex (MAC) to clarithromycin in some Asian countries have revealed a low rate of resistance to that antimicrobial agent. Thus, a clarithromycin-based anti-MAC regimen should be effective for MAC infections. However, clarithromycin resistance due to the mutation of the 23S rRNA gene in MAC strains has been detected in many countries. Therefore, physicians should avoid monotherapy with clarithromycin and consider the possibility of clarithromycin resistance in patients who do not respond to clarithromycin-based regimens. Rifampicin is the critical component of successful management of *Mycobacterium kansasii* diseases. Although most *M. kansasii* isolates are susceptible to rifampicin in Western countries and in Japan, this agent may not work well in Taiwan. Rapidly growing mycobacteria (RGM) is a prevalent NTM group worldwide, particularly in Asia; however, each NTM species in this group may have its own distinct antibiotic susceptibility pattern, and close monitoring of the antibiotic-resistance patterns of RGM is necessary. Most important of all, the *in vitro* susceptibility may not represent the *in vivo* activity until the confirmation of the clinical study. Therefore, further investigation of the clinical effectiveness of the anti-NTM agents is warranted.

© 2015 Published by Elsevier Ltd. on behalf of Asian-African Society for Mycobacteriology.